IN THE CLAIMS:

Please substitute the following claims for the same numbered claims in the application.

1-8. (Canceled).

9. (Currently Amended) A semiconductor for use in a bipolar transistor, said semiconductor comprising:

carbon atoms; and

a doped region that comprises less than all of said semiconductor and comprises a dopant interacting with said carbon atoms,

wherein said carbon atoms limit outdiffusion of said dopant to physically limit a size of said doped region within said semiconductor, and wherein ~~and~~ said dopant is included in sufficient quantities to reduce a resistance of said semiconductor to less than approximately 4 Kohms/cm^2.

10. (Currently Amended) The semiconductor in claim 9, wherein said dopant is included in a peak concentration of approximately 1 x 10^{20} per cm^3 to 1 x 10^{21} per cm^3.

11. (Original) The semiconductor in claim 9, wherein said dopant comprises one of boron, aluminum, gallium, indium, and titanium.

12. (Original) The semiconductor in claim 9, further comprising silicon germanium.

13. (Original) The semiconductor in claim 9, wherein said carbon atoms maintain said dopant within a central portion of said semiconductor.

14-19. (Canceled).

20. (New) A a bipolar transistor comprising:

a semiconductor layer comprising:

a single crystalline region;

a polycrystalline region adjacent said single crystalline region;

carbon atoms within said single crystalline region and said ploycrystalline region; and

a doped region in said single crystalline region adjacent said polycrystalline region, wherein said doped region comprises a dopant interacting with said carbon atoms,

wherein said carbon atoms limit outdiffusion of said dopant such that a size of said doped region is physically limited within said semiconductor layer, and

wherein said dopant is included in sufficient quantities to reduce a resistance of said semiconductor and provide improved electrostatic discharge protection of said bipolar transistor.

21. (New) The bipolar transistor in claim 20, wherein said dopant is included in a peak concentration of approximately 1×10^{20} per cm^3 to 1×10^{21} per cm^3.

22. (New) The bipolar transistor in claim 20, further comprising a collector below said

semiconductor layer, wherein said collector comprises another doped region adjacent said doped region in said semiconductor layer.

23. (New) The bipolar transistor in claim 20, further comprising a collector below said semiconductor layer, wherein said collector comprises a shallow trench isolation structure adjacent said polycrystalline region.

24. (New) The bipolar transistor in claim 20, further comprising an emitter contact and a base contact, wherein said carbon atoms maintain said dopant within a central portion of said semiconductor layer between said emitter contact and said base contact.

25. (New) The semiconductor in claim 20, wherein said carbon atoms reduce strain within said semiconductor layer.

26. (New) A bipolar transistor comprising:

a semiconductor layer comprising:

a single crystalline region;

a polycrystalline region adjacent said single crystalline region;

a doped region in said single crystalline region adjacent said polycrystalline region; and

carbon atoms within said single crystalline region and said ploycrystalline region;

wherein said carbon atoms limit outdiffusion of said dopant such that a size of said doped region within said semiconductor layer is physically limited to increase speed and

control breakdown voltage of said bipolar transistor.

27. (New) The bipolar transistor in claim 26, wherein said dopant is included in a peak concentration of approximately 1×10^{20} per cm^3 to 1×10^{21} per cm^3.

28. (New) The bipolar transistor in claim 26, further comprising a collector below said semiconductor layer, wherein said collector comprises another doped region adjacent said doped region in said semiconductor layer.

29. (New) The bipolar transistor in claim 26, further comprising a collector below said semiconductor layer, wherein said collector comprises a shallow trench isolation structure adjacent said polycrystalline region.

30. (New) The bipolar transistor in claim 26, further comprising an emitter contact and a base contact, wherein said carbon atoms maintain said dopant within a central portion of said semiconductor layer between said emitter contact and said base contact.

31. (New) The semiconductor in claim 26, wherein said carbon atoms reduce strain within said semiconductor layer.